Benefit of Liberalizing Trade in Services: Impact on Growth and Employment

Yan Wang
Senior Economist, World Bank
Ywang2@worldbank.org

Prepared for the Training of Trainers course on “Trade Policy and WTO Accession”
Hanoi, Vietnam
May 8-16, 2005
Outline

Previous session looked at impact of trade in goods, here we examine trade in services

• Theories regarding the gains from trade
• Why are Services so important?
• Benefits of opening services trade: deepening division of labor, higher productivity in goods sector, learning by doing, etc
• Empirical evidence on services trade and growth
• Impact of China’s service liberalization-CGE analysis, based on Li, Wang and Zhai (2003)
• Summary
I. International Trade Theory: a Review

- Well-known trade models:
  - Ricardo (comparative advantage based on differences in productivity levels)
  - Heckscher-Ohlin (comparative advantage based on differences in factor endowments)
  - Krugman-Helpman (trade driven by economies of scale and consumers’ love of variety; explains intra-industry trade)
  - The new trade models and new growth theory based on creative destruction [see below]
Growth models

• Neoclassical growth theory (Robert Solow)
  – Diminishing returns to the accumulation of capital and labor
  – Sustained growth requires continuous technological progress (exogenous to the model)

• Endogenous growth theory (Paul Romer)
  – Technological progress within the system
  – Models incorporate research, development and technology diffusion

• New models of Creative Destruction (Aghion and Howitt 1992)
The role of Entry and Exit

• Schumpeter’s idea of Creative Destruction (1942) stresses innovation / new products & new services

• New endogenous growth model stress vertical innovations generated by research (Aghion and Howitt 1992)
  – Monopoly rents provide the payoff / incentives for research
  – Better products/ services render previous ones obsolete.

• New entrants with better products / services drive the old firms out--good for productivity.

• Implications for trade: Competition / entry and exit are good for productivity growth
  – process encourages innovation and reallocation of resources from inefficient ones to efficient one.

See also Melitz 2003, Hummels and Klenow 2005.
Creative Destruction: Entry, Exit & competition raise productivity growth

- New Entrants with new tech
- Firms with obsolete tech exit
- Manufacturing firms become more productive
- Deeper division of labor
- Spin-off services
- Trade and competition
- Reallocation
- Productivity growth
Competition forced spin-offs and outsourcing and led to deeper division of labor
Global Sourcing is possible: Local vs. global along the value chain
II. Why services matter

• Services account for large shares of production and employment in most economies around the world. These ratios are higher for industrial countries.

• The share of services in world trade and investment has been increasing. They have been among the fastest growing components of world trade over the last 15 years. Today, more than half of annual world FDI flows are in services, and the value of sales abroad by foreign affiliates of US service firms is estimated to be 3.5 times greater than their cross border exports.

• Some services are low-skilled labor intensive such as tourism and personal services. Thus the expansion of these services are conducive to job creation and poverty reduction.
Service Sector as a Percentage of GDP (Year 2003)

Source: WDI 2005, China 2004 Service data: NBS
The role of services as input to the good sector

- Many services are key input to the production of other goods and services, and thus crucial for the competitiveness of the goods-export sector.
- Inefficient provision of services acts like a tax on other producers in the economy.
- For exporters in agriculture and manufacturing, inefficient provision of services can lead to negative rates of effective protection.
Why open the service sector

- Services as engine of growth: since deeper division of labor and specialization contribute to competitiveness and higher productivity
- Services trade / entry [foreign or domestic] and exit are conducive to productivity growth
- Liberalization in service may generate sizable gains
  - A) Standard gains from trade and specialization;
  - B) Services as intermediate input—better services for the goods sector;
  - C) Gains from FDI as a means for trade --learning-by-doing.
  - D) Entry and exit /Competition are good for productivity growth due to resource reallocation, etc
III. Empirical evidence on Services Trade and Growth

• In the US, Service-producing industries account for
  – three-fourths of post-1995 growth in aggregate labor productivity. and
  – all of the acceleration in labor productivity and Multi-factor Productivity (MFP) relative to 1987-95.

• Large contribution of IT-producing sectors to MFP is offset by declines in other goods-producing industries (Bosworth and Triplett 2004)
Evidence in Transition Economies

• Exports of services (BOP basis) up from 2 to 8% of GDP, 1990-2004
  – EU-15 average = 8%
  – Southern/Eastern Europe = 11%; CIS = 5%

• Services FDI now accounts for 60% of global stock; but some 80% in Baltics

• Business services = 40% of total inward FDI stock in DCs, vs. 20% in OECD

• Transport/telecoms = 25% in transition economies vs. 10% elsewhere
In transition Economies

• Controlling for change in investment/GDP, inflation, crises, addition of services policy variables statistically significant > 1% level (Eschenbach & Hoekman 2005)

• Using firm data from 350 firms from Czech Republic, Mattoo et al found that
  – There is a positive relationship between services sector reform and the performance of domestic manufacturing firms relying on services inputs
  – Allowing foreign entry is the key channel through which services liberalization may affect performance of downstream manufacturing sectors
Services liberalization and growth

Source: Mattoo, Rathindran, and Subramanian (2001)

Linear prediction

Composite services liberalization index

Growth rate (adjusted for other factors)
IV. China lags behind in service sector development

- Underdeveloped and inefficient: in China, Services accounted for 34% of GDP in 2004 (which was adjusted upward to 40.7% by NBS), lagging behind other industrial and developing countries. Why?
  1. Under-reporting /data issue
  2. It is a part of “Imbalances” existing in the Economy
     - Inadequate education and health services in rural areas
     - Inadequate access to financial services by SMEs
     - Overinvestment in physical capital and underinvestment in human and natural capital
  3. State monopoly, lack of competition in some sectors;
- How to correct this imbalance?
However, China’s service sector share in GDP had been stagnant or falling.

Factors for China’s lagging Services

• Under-reporting (as informal sector is large)
• Lack of competition—entry barriers in many sectors such as banking, telecom, civil aviation, and railways, and restrictions on non-state capital and foreign capital investment
• Low level of marketization (government-led growth)
• Low level of urbanization
• Inadequate human resources in many services: legal, accounting, financing, multimode distribution, E-commerce, computer software, R & D, market service, corporate management service, etc.
• Therefore, reform and liberalization is needed for the development of the service sector.
V. Macro impact of liberalizing the service sector—CGE analysis

A Computable General Equilibrium (CGE) model (based on Li, Wang and Zhai 2003)

- 52 production sector and 2 households: urban and rural

- Factors of Production
  - agricultural land, capital, labor by rural / urban and skill levels

- Monopolistic Competition
  - Transportation, communication, finance, insurance, real estate, social service, education, health and cultural service

Simulations Design

• Base case projection for 2000-2010
• Service liberalization case – incorporated four aspects of policy or institutional changes.
  – Promote competition in service sector
  – Increased foreign investment resulted from reduction of barriers
  – Increased productivity induced by service liberalization
  – Halving the barriers to services trade
• All policy changes will be phased in over the period from 2003-2010
Economic efficiency gains

Percentage change of GDP relative to base case, 2010

(1) Perfect competition
(2) More FDI
(3) Productivity promotion
(4) Reduction trade barrier

Combine (1)(2)(3)(4)
Sectoral adjustment

Percentage change of output relative to base case

Service

Industry

Agricultural

(4) Reduction trade barrier
(3) Productivity promotion
(2) More FDI
(1) Perfect competition
Combine (1)(2)(3)(4)
Change of output in service sector

Percentage change of output relative to base case

-1 1 3 5 7 9 11 13 15

Infrastructure

Commerce

Finance

Oth. Serv

(4) Reduction trade barrier
(3) Productivity promotion
(2) More FDI
(1) Perfect competition
Combine (1)(2)(3)(4)
Change of employment in service sector

Percentage change of output relative to base case

- Oth. Serv
- Finance
- Commerce
- Infrastructure

(1) Perfect competition
(2) More FDI
(3) Productivity promotion
(4) Reduction trade barrier
Combine (1)(2)(3)(4)
### Effects on sectoral output and employment, 2010

<table>
<thead>
<tr>
<th>Sector</th>
<th>Liberalization (% change with baseline)</th>
<th>Tourism boom (% change with liberalization case)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Output</td>
<td>Employment</td>
</tr>
<tr>
<td>Agriculture</td>
<td>0.8</td>
<td>0.5</td>
</tr>
<tr>
<td>Industry</td>
<td>1.1</td>
<td>0.3</td>
</tr>
<tr>
<td>Construction</td>
<td>4</td>
<td>3.1</td>
</tr>
<tr>
<td>Service</td>
<td>9</td>
<td>-2.2</td>
</tr>
<tr>
<td>Transportation</td>
<td>11.3</td>
<td>1.2</td>
</tr>
<tr>
<td>Post</td>
<td>8.1</td>
<td>-1.8</td>
</tr>
<tr>
<td>Tele-communication</td>
<td>16.5</td>
<td>6</td>
</tr>
<tr>
<td>Commerce</td>
<td>4.7</td>
<td>-5.3</td>
</tr>
<tr>
<td>Restaurant</td>
<td>5.8</td>
<td>-4.2</td>
</tr>
<tr>
<td>Finance</td>
<td>15.2</td>
<td>3.4</td>
</tr>
<tr>
<td>Insurance</td>
<td>12.7</td>
<td>1.5</td>
</tr>
<tr>
<td>Real Estate</td>
<td>24</td>
<td>11.9</td>
</tr>
<tr>
<td>Tourism</td>
<td>64.4</td>
<td>48.6</td>
</tr>
<tr>
<td>Civil Service</td>
<td>9.8</td>
<td>0.1</td>
</tr>
<tr>
<td>Education, health etc.</td>
<td>5</td>
<td>-4.2</td>
</tr>
<tr>
<td>Public Administration</td>
<td>0.8</td>
<td>-0.3</td>
</tr>
</tbody>
</table>

Effects of service liberalization

- Service liberalization will boost economic efficiency and have shared benefits
- Annual GDP growth rates will increase by 0.5 percentage point in 2003-2010
- Welfare gains amount to 827 bn yuan or 4.2% of GDP in 2010
- Real consumption rises by 6.8 % and real investment by 3.8 %
- Employment will rise only if construction is included, and wages for skilled and unskilled labor will rise by 3-6%, benefiting both rural and urban HHs.
Sectoral and Employment Results

- Output will expand in all service sectors, especially in highly regulated subsectors such as telecom, insurance, and banking.
- Tourism and real estate will experience big output booms and significant increases in their employment.
- Employment in the service sector will increase, if construction is included.
- In the case of a foreign tourism boom, both employment and output will increase significantly by 0.8 and 0.5 percent over the baseline.

Note: WTO/GATS definition includes construction in services.
Conclusions

• Trade in services brings efficiency gains from deeper division of labor, specialization, services as intermediate input to the goods sector, and “learning by doing” in new types of services.

• Entry and exit are crucial for productivity growth, as new ideas, technologies and processes are often embodied in new entrants to the market.

• Empirical evidence links services trade with productivity growth, in the US and Transition economies, and China.

• Our CGE analysis shows that opening service trade plus a tourism boom may lead to a rise in both output and employment.

• Complementary measures are needed to reduce strains for the rural poor.
References

• Hummels, David and Peter J. Klenow, 2005, AER, 95(3): 704-723

On services trade
• Eschenbach & Hoekman 2005
• Bosworth and Triplett 2004
• Arnold, Jens, Beata Javorcik and Aaditya Mattoo 2006
• Li, Shantong; Yan Wang; and Fan Zhai 2003. “Impact of Service Sector Liberalization on Employment and Output: A CGE Analysis”.